

TEXAS DEPARTMENT OF INSURANCE

Engineering Services / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
Phone No. (512) 322-2212 Fax No. (512) 463-6693

PRODUCT EVALUATION

WIN-1468

Effective November 1, 2011

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **March 2015**.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

Series 350 Vinyl Casement Windows, New and Replacement Construction, Non-Impact Resistant,
manufactured by

Pella Corporation
102 Main Street
Pella, Iowa 50219
Telephone: (641) 621-1000

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

The Series 350 casement windows specified in this report are vinyl casement windows. This evaluation report includes one wide casement window units. The vinyl casement windows may be installed as new construction windows or as replacement windows. This report includes non-impact resistant vinyl casement windows based on the following tested configurations:

General Description:

System	Description	Label Rating
1	Series 350; One Wide Vinyl Casement Windows; Fin Install; (X)	C-LC60 16 x 72
2	Series 350; One Wide Vinyl Casement Windows; Fin Install; (X)	C-LC50 24 x 72
3	Series 350; One Wide Vinyl Casement Windows; Fin Install; (X)	C-LC60 24 x 72
4	Series 350; One Wide Vinyl Casement Windows; Fin Install; (X)	C-LC50 32 x 72
5	Series 350; One Wide Vinyl Casement Windows; Fin Install; (X)	C-LC40 36 x 72
6	Series 350; One Wide Vinyl Casement Windows; Fin Install; (X)	C-LC60 36 x 72

General Description (continued):

System	Description	Label Rating
7	Series 350; One Wide Vinyl Casement Windows; Metal Clip Install; (X)	C-LC60 36 x 72
8	Series 350; One Wide Vinyl Casement Windows; Frame Install; (X)	C-LC60 36 x 72
9	Series 350; One Wide Vinyl Casement Windows; Frame Install; (X)	C-LC60 36 x 72

Product Dimensions:

System	Overall Size	Vent Size
1	16" x 72"	14" x 70"
2	24" x 72"	22" x 70"
3	24" x 72"	22" x 70"
4	32" x 72"	30" x 70"
5	36" x 72"	34" x 70"
6	36" x 72"	34" x 70"
7	36" x 72"	34" x 70"
8	36" x 72"	34" x 70"
9	36" x 72"	34" x 70"

Glazing Description:

System	Glass Construction ¹	Glazing Method ²
1, 2	IG-1	GM-1
3, 4, 5	IG-2	GM-1
6, 7, 8, 9	IG-3	GM-1

Note: ¹ See the "Glass Construction Key" for the glazing construction.

² See the "Glazing Method Key" for the glazing method description.

Glass Construction Key:

IG-1: Sealed insulating glass unit. The insulating glass unit is comprised of two single strength ($\frac{3}{32}$ " annealed glass lites separated by a metal reinforced butyl spacer system. The glass thickness and type used in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

IG-2: Sealed insulating glass unit. The insulating glass unit is comprised of two double strength ($\frac{1}{8}$ " annealed glass lites separated by a metal reinforced butyl spacer system. The glass thickness and type used in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

IG-3: Sealed insulating glass unit. The insulating glass unit is comprised of two $\frac{3}{16}$ " annealed glass lites separated by a metal reinforced butyl spacer system. The glass thickness and type used in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

Glazing Method Key:

GM-1: The insulating glass units are glazed against polyurethane reactive hotmelt sealant. The insulating glass units are secured with snap-in vinyl glazing beads.

Frame Construction: The frame members are manufactured from extruded vinyl (PVC). The frame corners are mitered and welded construction.

Sash Construction: The sash members are manufactured from extruded vinyl (PVC). The sash corners are mitered and welded construction.

Reinforcement:

Hardware:

- Multi point locks Inserted and screw connected over a milled slot on the interior face of the jamb. Each of the lock points engage a metal strike that is double screw connected to the edge of the sash lock stile.
- Casement egress hinges with integral slide shoes; Screw connected to the top and bottom rails of the sash. Metal hinge tracks are screw connected to the head and the sill of the frame.
- Roto operator; Reverse dyad, dyad, or dual arm roto-operator inserted into a milled slot in the interior face of the sill and is secured with screws. The operator linkage is attached to a screw mounted stud bracket on the bottom of the sash.
- Metal snubbers; Four (4) required; Double screw connected to the frame hinge jamb and the sash hinge stile.

Product Identification: A certification program label (WDMA) will be affixed to the window. The certification program label includes the manufacturer's name; the name of the product: **350 Series Vent Casement Annealed**; performance characteristics; the approved inspection agency (WDMA); and the applicable standards: ANSI/AAMA/NWDA 101/I.S.2-97 and AAMA/WDMA/CSA 101/I.S.2/A440-05.

LIMITATIONS

Design pressures:

System	Maximum Width (in.)	Maximum Height (in.)	Design Pressures (psf)
1	16	72	± 60
2	24	72	± 50
3	24	72	± 60
4	32	72	± 50
5	36	72	± 40
6	36	72	± 60
7	36	72	± 60
8	36	72	± 60
9	36	72	± 60

Impact Resistance: These window assemblies do not satisfy the Texas Department of Insurance's criteria for protection from windborne debris. These window assemblies will need to be protected with an impact protective system when installed in areas where windborne debris is required.

Acceptance of Smaller Assemblies: Windows assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

INSTALLATION INSTRUCTIONS

General: The window assembly shall be installed in accordance with the manufacturer's installation instructions and this evaluation report. Detailed installation instructions and drawings are available from the manufacturer.

Installation:

Systems 1, 2 (Fin Installation): The wood wall framing members shall be minimum Southern Yellow Pine dimension lumber. The windows shall be mounted to the wood wall framing members using the nailing fin of the window with minimum No. 10 screws with $\frac{1}{2}$ " diameter washers. The fasteners shall be spaced approximately $4\frac{1}{2}$ inches from each corner along the perimeter of the window. Additional fasteners are required along each side jamb, spaced approximately $15\frac{5}{8}$ inches on center. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ inches into the wood wall framing.

System 3 (Fin Installation): The wood wall framing members shall be minimum Southern Yellow Pine dimension lumber. The windows shall be mounted to the wood wall framing members using the nailing fin of the window with minimum No. 10 screws with $\frac{1}{2}$ " diameter washers. The fasteners shall be spaced approximately $4\frac{1}{2}$ inches from each corner along the perimeter of the window. Additional fasteners are required along each side jamb, spaced approximately $10\frac{3}{8}$ inches on center. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ inches into the wood wall framing.

System 4 (Fin Installation): The wood wall framing members shall be minimum Southern Yellow Pine dimension lumber. The windows shall be mounted to the wood wall framing members using the nailing fin of the window with minimum No. 10 screws with $\frac{1}{2}$ " diameter washers. The fasteners shall be spaced approximately $4\frac{1}{2}$ inches from each corner along the perimeter of the window. Additional fasteners are required along each side jamb, spaced approximately $15\frac{5}{8}$ inches on center and along the head and the sill, spaced approximately $13\frac{3}{8}$ inches on center. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ inches into the wood wall framing.

System 5, 6 (Fin Installation): The wood wall framing members shall be minimum Southern Yellow Pine dimension lumber. The windows shall be mounted to the wood wall framing members using the nailing fin of the window with minimum No. 10 screws with $\frac{1}{2}$ " diameter washers. The fasteners shall be spaced approximately $4\frac{1}{2}$ inches from each corner along the perimeter of the window. Additional fasteners are required along each side jamb, spaced approximately $10\frac{3}{8}$ inches on center and along the head and the sill, spaced approximately $13\frac{3}{8}$ inches on center. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ inches into the wood wall framing.

System 7 (Frame Installation – Metal Clips): The wood wall framing members shall be minimum Southern Yellow Pine dimension lumber. The windows shall be mounted to the wood wall framing members using the frame of the window with metal installation clips. The metal clip is interlocked into a T-slot groove on the back side of the window frame and secured with two (2) No. 10 x $\frac{1}{2}$ " screws. The clips are bent 90 degrees and secured to the interior face of the wall framing member with two (2) No. 10 x 2" screws. Along the head and side jambs, the clips are spaced approximately $4\frac{5}{8}$ inches from each corner, $15\frac{5}{8}$ inches on center along the side jambs, and $13\frac{3}{8}$ inches on center along the head. No fasteners are required along the sill. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ inches into the wood wall framing.

Systems 8 and 9 (Frame Installation - Screws): The wood wall framing members shall be minimum Southern Yellow Pine dimension lumber. The windows shall be mounted to the wood wall framing members using the frame of the window with minim No. 10 x 2" screws. Along the head and side

jamb, the clips are spaced approximately $4\frac{5}{8}$ inches from each corner, $15\frac{5}{8}$ inches on center along the side jamb, and $13\frac{3}{8}$ inches on center along the head. No fasteners are required along the sill. The fasteners shall be long enough to penetrate a minimum of $1\frac{1}{2}$ inches into the wood wall framing.

Note: The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.